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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/194,560	03/29/1999	MATS LEIJON	705/71509-2/	3345

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[REDACTED]
EXAMINER

MULLINS, BURTON S

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 05/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/194,560	LEIJON ET AL.
Examiner	Art Unit
Burton S. Mullins	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 March 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brem et al. (USP 4,638,199) in view of Elton et al. (USP 5,036,165). Brem discloses the claimed invention except for utilizing a conductor cable having at least two semiconducting layers. Brem discloses a turbo-generator comprising a stator having a core made of a stack of laminations, laminated compression plates clamped together by means of tie plates and tension bolts. In figures 7 and 8, Brem discloses the tie plates 3 constructed as tie segments 3' extending over several axially extending holes 6 for tension bolts 8. In addition, the laminated stator body 1 and the compression plate 2 have holes 14 for cooling the stator axially.

Elton et al. teach that it is known to use an electrical cable provided with an internal grading layer of semi-conducting pyrolyzed glass fiber layer in electrical contact with a cable conductor. In an alternate embodiment, Elton et al. teach having an electrical cable provided with an exterior layer of internal grading layer of semi-conducting pyrolyzed glass fiber layer in contact with an exterior cable insulator having a predetermined reference potential. Furthermore, Elton et al. teach that it was known to provide a semiconducting layer in the insulation of a conductor and to connect that layer to a fixed potential in order to provide an equipotential surface on the conductor preventing corona discharge around the conductors.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used an electrical cable similar to the one disclosed by Elton et al.

as winding conductors to the stator as disclosed by Brem since such a modification according to Elton et al. would have provided a cable that prohibited development of corona discharge and maintained a substantially uniform and equal electric potential over the surface of the conductor.

With regard to claims 16 and 17, note figure 6 of Brem wherein a pressure pad 13 is inserted between the compression plate and the tie plate to pre-stress the laminated stack.

With regard to claim 21, it would have been obvious for the inner semiconductor layer or the outer semiconductor layer to have had a substantially the same coefficient of thermal expansion with the insulation in order to prevent cracking and to reduce strain.

Response to Arguments

3. Applicant's arguments filed 3-22-01 have been fully considered but they are not persuasive. Applicant provided various arguments as to why the combination of the cited references, Brem and Elton et al. (^ 165), were not obvious, since the references fail to teach or to suggest motivations to combine. Applicant asserts that Brem is a low voltage machine, that Elton (^ 165) discloses only a transmission and distribution cable and that Elton et al. (^ 565), the parent application which is incorporated by reference, discloses generally the use of semi-conducting layer for insulated electrical conductors in three distinct embodiments. Moreover, applicant argues that in Elton et al. (^ 565) the conductors of the dynamoelectric machine are referred to exclusively as "windings" or "bars", and when referring to an electrical cable for carrying high voltage, Elton et al. (^ 565) refer to the conductors as "cable" not a "winding" or "bar". Applicant concludes that when the disclosure is taken together, the

conductor designated in Elton et al. ('165) relates to an electrical cable for transmission and distribution of electrical power and not for a winding for a dynamo electric machine. Applicant further argues that these are separate applications utilizing a common component and that Elton et al. ('165 and '565) do not teach the cable and the winding to be interchangeable.

Examiner disagrees with applicant's argument and contends that Elton et al. ('165) provide a teaching or suggestion for using his cable arrangement for dynamo-electric machines applications.

It is important to note that the thrust of the invention of Elton et al. ('165 and '565) is the use of a semi-conducting layer material with an insulated conductor. This is why Elton et al. ('565) provided three distinct embodiments utilizing a semiconducting layer, namely, in windings of a dynamoelectric machine, electrical cables and electrical housing surrounding a digital electronic equipment. In all applications, Elton et al ('565) teach that when the semiconducting layer is in electrical contact with an electrical ground, the layer prohibits the development of a corona discharge and bleeds off any electric charge developed on the exterior surface of an insulated conductor, (see column 7 lines 64 through column 8, lines 125).

In the art of motors, and as recognized by Elton et al. ('165), the problem of corona discharge in dynamo electric machines is commonly known and ever present. Elton et al. ('165) describes this problem in the background of the invention (column 1, lines 15-35) that corona discharge develops whenever an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator. The stationary armature core is generally made of laminations which define circumferentially spaced radial slots opening into the bore. Disposed in the slots are heavily insulated electrical windings causing a high

electrical potential between the windings or armature bars and the members of the stator defining the slots which are at an electrical ground. Accordingly, when the semiconducting layer is in electrical contact with the electrical ground, the layer prohibits the development of corona discharge and bleeds off any electric charge developed on the exterior surface of an insulated conductor.

In response to applicant's argument that Shildneck and Siemens are not concerned with high voltage operation, the definition of what exactly "high voltage" is remains vague in the specification. For instance, p.1, lines 14-15 suggests that "high voltage" includes machines designed to operate up to 36 kV, which would include the machines of Shildneck and Siemens. On p.1, lines 18-20, the suggestion is given that "high voltage" includes machines operating up to 800 kV. In any case, to argue that the references do not teach or suggest a feature which itself has not been clearly defined is not a convincing argument.

Regarding applicant's objection to the examiner's use of the dictionary definition of "cable," the examiner notes that claim language is given the broadest reasonable interpretation. Here, the interpretation of "cable" as "a bound or sheathed group of mutually insulated conductors" is reasonable since windings in dynamoelectric machines, including those for high voltage applications, use these type of conductors for electrical transmission.

Regarding applicant's argument that the stiff cable of Elton et al. ('565) would not have motivated one to be substitute it for Shildneck's flexible cable, although this grounds of rejection has been removed and is therefore moot, the examiner position (with respect to the issue of Elton's stiff cable) is that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference;

nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Further, the courts have held “it is well settled that the test of obviousness is not whether the features of one reference can be bodily incorporated into the structure of another and proper inquiry should not be limited to the specific structure shown by the references, but should be into the concepts fairly contained therein, and the overriding question to be determined is whether those concepts would suggest to one skilled in the art the modifications called for by the claims.” *In re Van Beckum*, 169 USPQ 47 (CCPA 1971). Elton’s teaching at c.8, lines 3-9 that “the semi-conducting layer is a glass fiber which can be chopped, mixed with resin and molded, or blown on any complex shaped substrate [so that] the layer can be placed in intimate contact with substantially all of the exterior surface of the insulator or housing...” suggests that the semi-conducting layer can be “molded” or “blown” onto a cable without causing cable rigidity

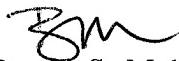
Conclusion

4. This is a CPA of applicant's earlier Application No. 09/194,560. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

5. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
May 23, 2002